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EXAMINER

CHAN, SING P

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,258

Applicant(s)

BURROW ET AL.

Examiner

Sing P Chan

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 27 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☒ Interview Summary (PTO-413) Paper No(s) 5.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-26, drawn to a method of making an article such as a folder or portfolio, classified in class 156, subclass 277.
 - II. Claims 27-28, drawn to an article, classified in class 190, subclass 901.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by a materially different process such as using an image transfer process in applying an image and protecting the image using a transparent cover sheet, which the cover sheet is ultrasonically weld onto the article over the image.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, the search required for Group I is not required for Group II, and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Michael E. Martin on May 1, 2002 a provisional election was made with traverse to prosecute the invention of group I, claims 1-26. Affirmation of this election must be made by applicant in replying to this Office action. Claims 27-28 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. The abstract of the disclosure is objected to because the abstract is more than 150 words in length. Correction is required. See MPEP § 608.01(b).

7. The disclosure is objected to because of the following informalities: The specification discloses Randy A. Kogutt and Micheal A. Kogutt are the inventors of the U. S. patent 5,961,140. However, the inventor for U.S. patent 5,961,140 is Lloyd W. Huskey. It is suggested the patent number be change to U.S. patent 5,961,150 which correspond to Randy A. Kogutt and Micheal A. Kogutt as the inventors.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 17, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The examiner suggests deleting "such as a folder or portfolio." (See claims 1 and 17, line 1)

Regarding claims 1 and 17, it is unclear what is intended by "adapted to have a printed image" since the body of the claims recite a method of making an article with a printed image. For the purpose of examination, a method of making an article with a printed image is assumed. The examiner suggests changing "adapted to have" to "with." (See claims 1 and 17, line 2)

Regarding claims 1 and 17, it is unclear what is intended with the phrase "providing a member to be formed as or forming at least part of said article." The phrase suggests the member can be the article. However, the article formed required a printed image. For the purpose of examination, "providing a member for forming at least part of said article" is assumed. (See claim 1 and 17, lines 4) It is also suggested adding "to form the article" after "bonding said image sheet to said member." (See claim 1, line 13 and claim 17, line 21)

Regarding claim 11, it is unclear what is intended by calendaring a sheet prior to applying a coating, where the step does not provide a textured surface. However, debossing the surface of the sheet does provide a textured surface. For the purpose of

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examination, "providing a textured surface of said image sheet by calendering a surface of said image sheet prior to applying said coating and debossing a texture surface on said image sheet" is assumed. The examiner suggests deleting "one of."

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

11. Claims 1, 2, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Jenkins (U.S. 5,974,230).

Regarding claim 1, Jenkins discloses a method of generating label. The method includes printing a full sheet of labels, i.e. image sheet, remove each labels, placing the

removed label to the edge of a file folder, and bonding the label to the folder. (Col 4, lines 47-54)

Regarding claim 2, Jenkins discloses the image sheet is die cut to facilitate removal of each label. (Col 4, lines 51-52)

Regarding claim 12, Jenkins discloses a clear vinyl cover sheet with a pressure sensitive adhesive is laminated to the image sheet prior to die cutting to individual labels. (Col 4, lines 49-54)

Regarding claim 13, Jenkins discloses a complete pointed sheet is die cut into individual labels. (Col 4, 47-54)

Regarding claim 14, Jenkins discloses laminating a clear vinyl cover sheet over the complete printed sheet. (Col 4, lines 47-54)

12. Claims 1, 3, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin (U.S. 6,319,349).

Regarding claim 1, Lin discloses a method for making plastic tiles. The method includes the steps of providing a polyvinyl chloride substrate, a polyvinyl chloride skin layer, i.e. image sheet, and a polyvinyl chloride protective layer, print a pattern on to the skin layer, and laminating all three layers via hot pressing or calendering means. (Col 2, lines 23-58)

Regarding claim 3, Lin discloses the image sheet and the substrate comprise of polyvinyl chloride, which is a flexible plastic material. (Col 2, lines 25-27)

Regarding claim 12, Lin discloses a protective layer is laminated over the image sheet. (Col 2, lines 23-55 and Figure 2)

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 3, 8, 10, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (U.S. 5,974,230) as applied to claims 1, 2, and 14 above, and further in view of Herrin (U.S. 4,477,013) and Lu et al (U.S. 5,891,552).

Regarding claims 3 and 15, Jenkins is silent as to the image sheet and the folder are formed of a flexible plastic material. However, forming the image sheet and the folder with flexible plastic material is well known and conventional as shown for example by Herrin (folder) and Lu et al (image sheet). Lu et al discloses a printed plastic film, which can be use as an image sheet. The image sheet is comprised of material such as polyvinyl chloride with at least one side can be heat seal or pressure seal (Col 6, lines 33-52) and can be coated with opacifying particulates and/or pigments to render the film the desired degree of translucency or opacity. (Col 4, lines 51-53) The folder comprises of conventional manila paper or stiff card-stock material and a front panel of a stiff translucent clear transparent plastic such as polyvinyl chloride. (Col 2, lines 40-63)

It would have been obvious to one skilled in the art at the time the invention was made to form the image sheet and the folder of plastic material such as polyvinyl chloride, which is durable, inexpensive to manufacture, and capable of being decorated.

Regarding claim 8, Jenkins discloses printing image on the image sheet as part of larger opaque sheet. (Col 3, lines 40-52 and Col 4, lines 47-54) However, Jenkins is silent as to the printing comprises of inkjet printing, photostatic printing, and thermal ribbon printing. But these printing methods are well known and convention to one in the art shown by the availability of inkjet printers, laser printers, and thermal ribbon printers.

It would have been obvious to one skilled in the art at the time the invention was made to print the images on a larger sheet material to form multiple image sheets to prevent unnecessary waste of the sheet material and using inkjet printer, photostatic printer, or thermal ribbon printer to print the images where these printers are easily obtain and easy to use.

Regarding claim 10, Jenkins is silent as to applying an ink receptive coating to the image sheet. However, applying an ink receptive coating onto a plastic image sheet is well known and conventional as shown for example by Lu et al. Lu et al discloses the image sheet is coated with an ink absorbing material. (Col 3, line 31 to Col 4, line 57)

It would have been obvious to one skilled in the art at the time the invention was made to coat the image sheet with an ink receptive coating to allow better adhesion of the ink to the image sheet.

Regarding claim 16, Jenkins discloses a clear vinyl face sheet, which include polyvinyl chloride. (Col 2, lines 65-66 and Figure 2)

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15. Claims 4, 5, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (U.S. 5,974,230) in view of Herrin (U.S. 4,477,013) and Lu et al (U.S. 5,891,552) as applied to claims 3 and 10 above, and further in view of Becker et al (U.S. 4,778,547).

Regarding claim 4, Jenkins is silent as to bonding of the image sheet to the folder by pressing and applying RF energy. However, applying pressure and RF energy to bond image sheet and substrate is well known and conventional shown for example by Becker et al. Becker et al discloses decorated polyvinyl chloride die cut layers are laminated to the base material by placing the composite into a flatbed press and applying high frequency energy and pressure to the composite. (Col 6, line 41 to Col 7, line 2)

It would have been obvious to one skilled in the art at the time the invention was made to use RF energy to bond the image sheet to the folder or substrate, which heat and allows the polyvinyl chloride image to soften and flow and ensure proper sealing and bonding of the image sheet to the folder or substrate.

Regarding claim 5, Jenkins does not disclose debossing the folder or substrate to form an indentation while bonding the image sheet to the folder or substrate. However, debossing the substrate or folder while bonding the image to the substrate or folder is well known and conventional as shown for example by Becker et al. Becker et al does disclose a deep embossing plate as part of the flatbed press. The embossing plate would be capable of debossing the substrate or folder during bonding of the image sheet to the substrate or folder. (Col 6, lines 56-59)

It would have been obvious to one skilled in the art at the time the invention was made to use a deep embossing die to deboss the substrate or folder form indentation to provide a texture feel to the substrate or folder.

Regarding claim 11, Jenkins does not disclose calendering the image sheet prior to coating and then debossing the image sheet to providing a texture. However, calendering a sheet prior to coating is well known and conventional as shown for example by Becker et al. Becker et al discloses the thermoplastic film is calendered and applied to the release carrier and subsequent to other application such as application of design, decoration or coating with adhesive (Col 5, lines 17-33) and then embossing after the layers and substrate are assemble into the composite to provide a texture surface. (Col 6, lines 56-67)

It would have been obvious to one skilled in the art at the time the invention was made to calendering the film to provide a smooth and glossy surface, which allow application of coating to be simple and easy.

16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (5,974,230) in view of Herrin (U.S. 4,477,013), Lu et al (U.S. 5,891,552), and Becker et al (U.S. 4,778,547) as applied to claim 4 above, and further in view of Graphik Vinyl Products Co., 2000 Catalog.

Jenkins does not disclose debossing the substrate or folder prior to placing the image sheet in contact with the substrate or folder. However, debossing the substrate or folder with an image sheet is well known and conventional as shown for example by

the Graphik Vinyl Products Co., 2000 Catalog. The catalog discloses a folder or substrate is debossed with heat form indentation in the substrate or folder. (Page 61)

It would have been obvious to one skilled in the art at the time the invention was made to deboss the folder or substrate prior to placing the image sheet where the debossing form an indentation in the substrate or folder, which would act as a guide for the image sheet placement.

17. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (5,974,230) in view of Herrin (U.S. 4,477,013), Lu et al (U.S. 5,891,552), and Becker et al (U.S. 4,778,547) as applied to claims 4 and 8 above, and further in view of Aitkens et al (U.S. 5,380,044).

Regarding claim 7, Jenkins does not disclose providing a debossing die, placing the image sheet on the debossing die, and placing the substrate or folder in contact with the image sheet prior to bonding the image sheet to the substrate. However, Aitkens et al does disclose placing a spacer, i.e. a debossing die, on the bottom of the pressing jig to provide texture onto the vinyl laminate during bonding. (Col 9, lines 5-36)

It would have been obvious to one skilled in the art at the time the invention was made to place the debossing die on the bottom of the flatbed press, which the debossing die itself be used as a guide for the image sheet and allow proper align of the image sheet with the substrate or folder.

Regarding claim 9, Jenkins discloses the use of computer to generate graphic images and "clip art," which can then be printed on a color printer. (Col 3 line 50 to Col 4, line 40) However, Jenkins is silent as to providing an image from an image source by

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employing a scanner and copying the source. However, scanning and copying an image are well known and conventional as shown for example by Aitkens et al. Aitkens et al discloses a corporate logo or graphic design can be read into the computer by using an optical scanner. (Col 5, lines 5-10)

It would have been obvious to one skilled in the art at the time the invention was made to use an optical scanner to copy a graphic design or image to the computer and transferring the image to the printer to be printed, where the optical scanner is readily available and perform with ease.

18. Claims 17, 19-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (U.S. 5,974,230) in view of Lu et al (U.S. 5,891,552), Becker et al (U.S. 4,778,547), and Aitkens et al (U.S. 5,380,044).

Regarding claim 17, Jenkins discloses a method generating a label. The method includes providing a sheet of material, providing a microprocessor to control and transfer the image or graphic to a printer, printing the image or graphic onto the sheet material die cutting the sheet material into multiple image sheet, place the image sheet in contact with the substrate or folder, and bonding the image sheet to the substrate or folder. (Col 3, line 40 to Col 4, lines 54) Jenkins does not disclose the sheet material is comprises of flexible plastic material, transferring an image to the processor to be applied to the sheet material, and bonding and debossing the image sheet using RF energy. However, these are all well known and conventional as shown for example by Lu et al, Becker et al, and Aitkens et al. Lu et al discloses the printed plastic films. The film material comprises of polyvinyl chloride and includes a heat seal or pressure seal

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surface and is moisture resistant and more durable than the paper material. (Col 6, lines 33-52) Lu et al does not disclose transferring of an image to a processor and bonding and debossing using RF energy. Becker et al discloses a method of bonding and embossing layers of plastic films to a plastic base using RF energy. The die cut layers film and base material are placed in a flatbed press with a embossing plate and a flat back plate. High frequency energy is applied after the press is closed to apply pressure. The heat generated will soften the plastic film material and allows the plastic film material to flow to assist in the sealing and bonding of the film material to the base material. (Col 6, lines 9-67) Becker et al does not disclose the transfer of image to a processor. Aitkens et al discloses a method of forming an identification card. The method includes using an optical scanner to read into the process the image, which would be printed onto the image sheet. (Col 5, lines 1-10)

It would have been obvious to one skilled in the art at the time the invention was made to provide a printing sheet of polyvinyl chloride as the image sheet, transferring an image to be printed onto the image sheet to a processor, and bond the image sheet to the folder or substrate using RF energy as disclose by Lu et al, Becker et al, and Aitkens et al in the method of Jenkins to provide a moisture resistance image sheet and providing an image with an easy and readily available scanner and scanning method, and properly bond and seal the image sheet onto the folder or substrate.

Regarding claim 19, Jenkins does not disclose placing the image sheet onto the debossing die and placing the folder or substrate over the image sheet prior to bonding the image sheet to the folder or substrate. Aitkens et al discloses a spacer (92), i.e.

debossing die, is placed in the jig, the image sheet (12b) is placed over the debossing die, and then the plastic laminate, i.e. the substrate, is place over the image sheet prior to bonding the image sheet to the substrate. (Col 9, lines 5-36 and Figure 5)

It would have been obvious one skilled in the art at the time the invention was made to provide a debossing die, placing the image sheet on the debossing die and then placing the folder or substrate onto the image sheet prior to bonding, where the debossing die act as a guide device to properly place the image sheet in alignment with the folder or substrate should the image sheet is smaller in dimension than the folder or substrate.

Regarding claim 20, Jenkins does not disclose using a guide device on the folder or substrate for guiding the image sheet onto the folder or substrate. However, one in the art would appreciate using a guide device to aid in properly placing the image sheet onto the folder or substrate should the image sheet is smaller in dimension than the folder or substrate and therefore, it would have been logical for one in the art to provide a guide device on the folder or substrate to properly align the image sheet onto the folder or substrate.

It would have been obvious to one skilled in the art at the time the invention was made to provide a guide device on the folder or substrate to easily align and place the image sheet onto the folder or substrate.

Regarding claim 21, Jenkins does not disclose the use of light beam for guiding the placement of the image sheet. However, one in the art would appreciate providing at least one light beam to illuminate the work area to allow better viewing of the

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laminate. It would be logical to one in the art to use a light beam to illuminate the substrate in order to accurately place the image sheet onto the substrate.

It would have been obvious to one skilled in the art at the time the invention was made to use at least one light beam to illuminate the substrate to aid the operator in the placement of the image sheet onto the substrate.

Regarding claim 22, Jenkins discloses a clear vinyl cover sheet is laminated over the printed sheet prior to die cutting to remove the image sheet. (Col 4, lines 47-54)

Regarding claim 23, Jenkins discloses the cover sheet is a clear vinyl, which includes polyvinyl chloride since it is commonly used for clear vinyl product but is silent as the sheet material is polyvinyl chloride. Lu et al teaches using a polyvinyl chloride sheet as the printing sheet, where the material provides a strong, moisture resistance, and inexpensive image sheet for the printing process. (Col 3, lines 14-15 and Col 6, lines 33-52)

It would have been obvious to one skilled in the art at the time invention was made to provide sheet material and transparent sheet of polyvinyl chloride, which are strong, moisture resistance and inexpensive.

Regarding claim 24, Jenkins does not discloses debossing the folder or substrate to form indentation while bonding the image sheet to the folder or substrate. However, Becker et al teaches the laminate composite can be place in a flatbed press with a deep embossing die where the die will deboss the folder or substrate to form indentation in the folder or substrate while bonding the image sheet to the folder or substrate.

It would have been obvious to one skilled in the art at the time the invention was made to deboss the folder or substrate while bonding the image sheet to the folder or substrate to seal and remove air pocket where the indentation provide a richer feel to the folder or substrate.

Regarding claim 26, Jenkins does not disclose application of an ink receptive coating on the sheet material. However, Lu et al teaches the application of ink absorbing material onto the polyvinyl chloride sheet, which allow the ink to adhere properly onto the sheet material.

It would have been obvious to one skilled in the art at the time the invention was made to provide an ink receptive coat on the sheet material as taught by Lu et al to allow the ink to properly adhere to the sheet material without spreading.

19. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (U.S. 5,974,230) in view of Lu et al (U.S. 5,891,552), Becker et al (U.S. 4,778,547), and Aitkens et al (U.S. 5,380,044) as applied to claim 17 above, and further in view of Graphik Vinyl Product Co., 2000 Catalog.

Jenkins does not disclose debossing the folder or substrate to form an indentation to provide for a guide for locating the image sheet prior to placing the image sheet onto the folder or substrate. However, the Graphik Vinyl Product Co., 2000 Catalog disclose a folder can be deboss with an image sheet to form the indentation.

20. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (U.S. 5,974,230) in view of Lu et al (U.S. 5,891,552), Becker et al (U.S. 4,778,547), and

Aitkens et al (U.S. 5,380,044) as applied to claim 17 above, and further in view of Herrin (U.S. 4,477,013).

Jenkins is silent as to the folder or substrate and the sheet material are comprised of polyvinyl chloride. However, it is well known and conventional to form the sheet material and folder with polyvinyl chloride as shown for example of Lu et al and Herrin. Lu et al discloses the printed sheet material can be form of polyvinyl chloride, which are moisture resistance and inexpensive to made. (Col 6, lines 33-52) and Herrin teaches the folder can be form of polyvinyl chloride, which is also durable, inexpensive to manufacture and capable of being decorated. (Col 2, lines 53-63)

It would have been obvious to one skilled in the art at the time the invention was made to provide the sheet material and folder or substrate form from polyvinyl chloride, which are readily available and inexpensive to make.

21. Claims 2, 4, 5, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (U.S. 6,319,349) as applied to claim 1, and further in view of Becker et al (U.S. 4,778,547).

Regarding claims 2 and 13, Lin is silent as to cutting the image sheet from a larger sheet prior to placing the image sheet in contact with substrate. However, it is well known and conventional to cut image sheet from a larger sheet as shown for example by Becker et al. Becker et al discloses a method of making a dimensionally stable, embossed, ornamented tile surface covering. The method includes the step of printing design on to the image sheet, die cutting the first and second layer with the desired dimension with the design while they are bonded together on the release

carrier. The two layers are laminated to the base material by placing the two upper layers onto the base material with low heating to warm the adhesive. (Col 6, lines 9-55) As an alternative, the two layers and the base material can also be bonded together prior to cutting into individual tile (Col 7, lines 5-10) and provide a graphic design the same size as the tile made.

It would have been obvious to one skilled in the art at the time the invention was made to cut image sheet from the larger sheet prior to placing the image sheet in contact with the substrate if the graphic image sheet required is smaller than the substrate and prevent excessive waste of the image sheet materials.

Regarding claim 4, Lin is silent as to bonding the image sheet to the substrate by using RF energy. However, the bonding of a polyvinyl chloride image sheet to a polyvinyl chloride substrate using RF energy is well known and conventional as shown for example by Becker et al. Becker et al discloses the polyvinyl chloride image sheet and the polyvinyl chloride base material are bonded together by applying high RF energy to a flatbed press. (Col 6, lines 56-67)

It would have been obvious to one skilled in the art at the time the invention was made to use RF energy as disclosed by Becker et al to bond and fuse the image sheet to substrate to ensure proper sealing and bonding of the image sheet to the substrate.

Regarding claim 5, Lin discloses embossing, i.e. debossing, the image sheet and the substrate to form indentation while bonding the image sheet and substrate together. (Col 1, lines 55-65)

Regarding claim 14, Lin discloses a transparent sheet is bonded to the image sheet over the image or design. (Col 2, lines 49-53 and Figure 4)

Regarding claim 15, Lin discloses the image sheet is comprises of polyvinyl chloride. (Col 2, lines 26-27)

Regarding claim 16, Lin discloses the protective cover sheet includes a polyvinyl chloride transparent sheet. (Col 2, lines 32-33)

22. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (U.S. 6,319,349) as applied to claims 1 and 2 above, and further in view of Becker et al (U.S. 4,778,547) and Aitkens et al (5,380,044).

Regarding claim 7, Lin is silent as to the image sheet and substrate are bonded together using a debossing die and placing the image sheet on the debossing die and then the substrate. However, the use of a heated die to bond and emboss are well known and conventional as shown for example by Becker et al and Aitkens et al. Becker et al discloses the layers and base material are placed in a flatbed press, which includes a deep embossing plate, i.e. debossing die, and a flat back plate. The image sheet is placed in position on the die and in engagement with the base material prior to applying energy to the bond. (Col 6, lines 56-60) However, Becker et al does not disclose placing the image sheet onto the debossing die and then placing the substrate onto image sheet, but Aitkens et al disclose a debossing die can be placed on top and on bottom of the pressing jig, which allow debossing the laminates with a texture finish to the top and bottom of the laminate. (Col 9, lines 5-36 and Figure 5) Furthermore, the

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debossing die can also be used as a guide to align the image sheet with the substrate to allow proper placement and bonding of the image sheet to the substrate.

It would have been obvious to one skilled in the art at the time the invention was made to position the image sheet on the die, which provided a guide for the proper placement of the image sheet in proper engagement with the substrate prior to applying energy to bond the image sheet to the substrate.

Regarding claim 8, Lin and Becker et al are silent as to the printing of the images on to the larger sheet is comprise of inkjet, photostatic printing, and thermal ribbon printing. However, these printing methods are well known and conventional as shown for example by Aitkens et al. Aitkens et al discloses using a color printer such as Kodak RGB printer or other color printers. (Col 7, lines 9-21) Furthermore, these printing methods are used in commonly found printers such as inkjet printer, LaserJet printer, and thermal ribbon printer.

It would have been obvious to one skilled in the art at the time the invention was made to use a color printer as disclosed by Aitkens et al to print the image and design onto the image sheet since these printers are readily available and easy to obtain.

Regarding claim 9, Lin and Becker et al are silent as providing an image from an image source by one of scanning and copying the image and transferring to the printing apparatus. However, scanning and transferring the image to the printing apparatus are well known and conventional as shown for example by Aitkens et al. Aitkens et al discloses an optical scanner can be used to read graphical designs into the C.P.U.

which then allow the computer to transfer the image to the printer for printing. (Col 5, lines 3-10)

It would have been obvious to one skilled in the art at the time the invention was made to provide an optical scanner as disclosed by Aitkens et al to allow easy and fast reproduction of the graphic image to a printer.

Regarding claim 10, Lin and Becker et al do not disclose applying an ink receptive coating on the image sheet prior to printing an image onto the image sheet. However, applying an ink receptive coating on the image sheet is well known and conventional as shown for example by Aitkens et al. Aitkens et al discloses the vinyl material is placed through a silicon application procedure where a thin film of silicon is applied to the sheet. The silicon on the vinyl material allows the ink from the printer to adhere image sheet. (Col 8, lines 4-32)

It would have been obvious to one skilled in the art at the time the invention was made to provide an ink receptive coating on the polyvinyl chloride image sheet to allow the ink from the printer to properly adhere to the image sheet without unwanted spreading of the ink.

Regarding claim 11, Lin does not disclose calendering the image sheet prior to coating and then debossing the image sheet to providing a texture. However, calendering a sheet prior to coating is well known and conventional as shown for example by Becker et al. Becker et al discloses the thermoplastic film is calendered and applied to the release carrier and subsequent to other application such as application of design, decoration or coating with adhesive (Col 5, lines 17-33) and then

embossing after the layers and substrate are assemble into the composite to provide a texture surface. (Col 6, lines 56-67)

It would have been obvious to one skilled in the art at the time the invention was made to calendering the film to provide a smooth and glossy surface, which allow application of coating to be simple and easy.

23. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (U.S. 6,319,349) in view of Becker et al (U.S. 4,778,547) as applied to claim 4 above, and further in view of Graphik Vinyl Products Co., 2000 Catalog.

Lin and Becker et al do not disclose debossing the substrate prior to placing the image sheet onto the substrate for bonding. However, debossing a substrate without an image sheet is well known and conventional as shown for example by the Graphik Vinyl Products Co., 2000 Catalog. The catalog discloses debossing a logo into the material without an image sheet (Pg 61, lines 24-31 and bottom Figure) and it would be logical to one in the art to deboss the substrate prior to placing the image sheet onto the substrate where the debossing would create a guide for accurate placement of the image sheet onto the substrate.

It would have been obvious to one skilled in the art at the time the invention was made to deboss the substrate prior to placing the image sheet onto the substrate to provide for a guide to accurately place the image sheet onto the substrate.

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24. Claims 17, and 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (U.S. 6,319,349) in view of Becker et al (U.S. 4,778,547) and Aitkens et al (U.S. 5,380,044).

Regarding claim 17, Lin discloses a method of making a plastic tile. The method includes the step of providing a polyvinyl chloride base substrate, a polyvinyl chloride skin layer, i.e. image sheet, printing an image or pattern onto the image sheet, bonding the image sheet to the base substrate using embossed surface hot pressing or calendering means. (Col 2, lines 23-58) Lin does not disclose the process of transferring an image to a processor or computer, causing the processor to print multiple images on the sheet material, cutting multiple image sheets from the sheet material along the contour of the image, and bonding the image sheet to the base substrate using RF energy. However, these steps are well known and conventional as shown for example by Aitkens et al and Becker et al. Aitkens et al discloses a method of forming identification card. The method includes the steps of using an optical scanner to read an image into the computer and the computer can manipulate image and output the image to a printer to be printed. (Col 5, lines 3-10 and Col 7, lines 5-14) Once the images are printed on various area of the sheet material, the image sheets are cut to the desired size. (Col 10, lines 25-33) However Aitkens et al is silent as to the use of RF energy to bond the laminates together. Becker et al discloses a method of forming a tile covering. The method includes using RF energy to bond laminates of polyvinyl chloride together. (Col 6, lines 9-67)

It would have been obvious to one skilled in the art at the time the invention was made to use an optical scanner to input the image into the computer for printing onto the sheet material, which is a simple and easy way on transferring the image onto the sheet material and cutting the sheet material into the image sheet to allow efficient use of the sheet material and bonding the laminates together using RF energy to ensure proper sealing and bonding of the laminates as taught by Aitkens et al and Becker et al.

Regarding claim 19, Lin is silent as to the image sheet and substrate are bonded together by placing the image sheet on the debossing die and then placing the substrate on top of the image sheet. However, Aitkens et al disclose the debossing die can be placed to the top and bottom of the laminate in the pressing jig, which allow debossing the laminates with a texture finish onto top and bottom of the laminate. (Col 9, lines 5-36 and Figure 5) Furthermore, the debossing die can also be used as a guide to align the image sheet with the substrate to allow proper placement and bonding of the image sheet to the substrate.

It would have been obvious to one skilled in the art at the time the invention was made to position the image sheet on the die, which provided a guide for the proper placement of the image sheet in proper engagement with the substrate prior to applying energy to bond the image sheet to the substrate.

Regarding claim 20, Lin does not disclose the use of guide device on the substrate to guide the image vinyl laminate onto the substrate. However, it would be logical to one in the art to use a guiding device to allow precise repeated placement of the image sheet onto the substrate.

It would have been obvious to one skilled in the art at the time the invention was made to provide a guide device to allow fast, easy, accurate, and repeat placement of the image vinyl laminate onto the substrate.

Regarding claim 21, Lin does not disclose the use of light beam for guiding the placement of the image sheet. However, it would be logical to one in the art to use a light beam to illuminate the substrate in order to accurately place the image sheet onto the substrate.

It would have been obvious to one skilled in the art at the time the invention was made to use at least one light beam to illuminate the substrate to aid the operator in the placement of the image sheet onto the substrate.

Regarding claim 22, Lin does silent as to laminating the transparent cover sheet over the sheet material prior to cutting the image sheet from the sheet material. However, Becker et al does disclose the bonding of the first and second film prior to cutting the film in register with the design. (Col 6, lines 24-45)

It would have been obvious to one skilled in the art at the time the invention was made to bond the protective covering film over the image to protect and shield the image from damage and for easier handling.

Regarding claim 23, Lin discloses the sheet material is comprised of polyvinyl chloride. (Col 2, lines 32-36)

Regarding claim 24, Lin discloses the image sheet is debossed while bonding to the substrate. (Col 1, lines 55-65)

Regarding claim 25, Lin discloses the sheet material and substrate are comprised of polyvinyl chloride. (Col 2, lines 24-27)

Regarding claim 26, Lin is silent as to applying an ink receptive coating on to the sheet material. However, applying an ink receptive coating onto a plastic film is well known and conventional as shown for example by Aitkens et al. Aitkens et al discloses a thin film of silicon is applied to the vinyl material to allow the printer's ink to readily adhere.

It would have been obvious to one skilled in the art at the time the invention was made to coat the sheet material with an ink receptive coating to allow the ink from the printer to readily adhere without spreading to distort the image.

25. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin (U.S. 6,319,349) in view of Becker et al (U.S. 4,778,547) and Aitkens et al (U.S. 5,380,044) as applied to claim 17 above, and further in view of Graphik Vinyl Products Co., 2000 Catalog.

Lin, Becker et al, and Aitkens et al do not disclose debossing the substrate prior to placing the image sheet onto the substrate for bonding. However, debossing a substrate without an image sheet is well known and conventional as shown for example by the Graphik Vinyl Products Co., 2000 Catalog. The catalog discloses debossing a logo into the substrate without an image sheet (Pg 61, lines 24-31 and bottom Figure) and it would be logical to one in the art to deboss the substrate prior to placing the image sheet onto the substrate, where the debossing would create a guide for accurate placement of the image sheet onto the substrate.

It would have been obvious to one skilled in the art at the time the invention was made to deboss the substrate prior to placing the image sheet onto the substrate to provide for a guide to accurately place the image sheet onto the substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sing P Chan whose telephone number is 703-305-3175. The examiner can normally be reached on Monday-Friday 7:30AM-12:00PM and 1:00PM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Sing P Chan
Examiner
Art Unit 1734

spc
June 3, 2002



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